INFORMATION ACQUISITION DEVICE IN THREE-DIMENSIONAL SHAPE

Patent Number:

JP2000111320

Publication date:

2000-04-18

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Requested Patent:

JP2000111320

Application Number: JP19980282770 19981005

Priority Number(s):

IPC Classification: G01B11/24; G01C11/06; G06T7/00; G06T15/00

EC Classification:

Equivalents:

Abstract

PROBLEM TO BE SOLVED: To nearly automatically read the dimensions of an object by allowing the inverse matrix of a coordinates conversion matrix to operate on a screen coordinates value for each image, and by calculating the spatial coordinates value of an object point,

SOLUTION: The photographic image of an object is taken into an image input device 2 by an image-reading device 1, and a spatial coordinates scale picture in an image is recognized. Then, a coordinates value in a screen coordinates system is acquired by a coordinates- reading device 5. Also, the screen coordinates value of an object point is read, is paired with the attribute of the object point, and is stored into an object point coordinates value storage device 8. After a required coordinates conversion function is accumulated, a coordinates conversion inverse function calculation device 10 calculates a function being used for the inverse conversion of a coordinates system for storing into a coordinates conversion function storage device 7. Then, an object point spatial coordinates calculation device 11 takes out the screen coordinates value of the object point and the inverse conversion function from the storage devices 8 and 7, respectively, inverse conversion operation is made, and the spatial coordinates value of the object point is calculated. The spatial coordinates value of the object point is stored into a three-dimensional display information storage device 12, and is taken into various kinds of information processing devices for utilizing.

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